Building Effective Aging Drivers Interventions: Do You Have All the Right Pieces?

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Our Panelists

- Toni Miles, MD, PhD, University of Georgia College of Public Health (tonimile@uga.edu)
- Guohua Li, MD, DrPH, Columbia University (GL2240@cumc.columbia.edu)
- Elizabeth Head, MPH, Georgia Department of Public Health (Elizabeth.Head@dph.ga.gov)
- Amelia Hayes, PE, Federal Highway Administration (amelia.hayes@dot.gov)
- Johanna Zmud, PhD, Texas A&M Transportation Institute (j-zmud@tti.tamu.edu)

Lifesavers, April 22-24, 2018
Older Driver Physiology

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University of Georgia College of Public Health
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Lifesavers, April 22-24, 2018
Big Idea: What is your challenge in understanding older drivers?

• Change evolves over time.
• Physicians only see a one-time snap-shot.
• Age does not predict all change.
• Hence, the need for a good medical history.
Compensation: The Key to Physiology!

When one system is compromised, others will compensate.

Compensation is suboptimal when multiple systems are compromised.

Example: Tendency to fall

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## Health, Environment and Functional Ability

<table>
<thead>
<tr>
<th>Group</th>
<th>Health</th>
<th>Ideal Setting*</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>GoGo</td>
<td>Excellent</td>
<td>Community, Own Home</td>
<td>Anything</td>
</tr>
<tr>
<td>GoSlow</td>
<td>Very Good</td>
<td>Community, Own Home,</td>
<td>Self limiting (Ex. driving)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Distant relatives</td>
<td></td>
</tr>
<tr>
<td>SlowGo</td>
<td>Good</td>
<td>Variable, Close Relatives</td>
<td>IADL Assistance</td>
</tr>
<tr>
<td>SlowSlow</td>
<td>Fair</td>
<td>Assisted living or Long Term Care</td>
<td>Critical ADL Assist</td>
</tr>
<tr>
<td>NoGo</td>
<td>Poor</td>
<td>Long Term Care</td>
<td>Many ADL assists</td>
</tr>
</tbody>
</table>

*Based on functional capacity. Source: HJ Cohen

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[University of Georgia College of Public Health Logo]
Health, Environment & Functional Ability: Range of independent, community dwelling older adults

<table>
<thead>
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<th>Ideal Setting*</th>
<th>Activity</th>
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<td>Excellent</td>
<td>Community, Own Home</td>
<td>Anything</td>
</tr>
<tr>
<td>GoSlow</td>
<td>Very Good</td>
<td>Community, Own Home, Distant relatives</td>
<td>Self limiting (Ex.driving)</td>
</tr>
<tr>
<td>SlowGo</td>
<td>Good</td>
<td>Variable, Close Relatives</td>
<td>IADL Assistance</td>
</tr>
</tbody>
</table>

Can you think of conditions that contribute to activity limitations?

- Arthritis – Walking
- Congestive heart failure – Mobility
- Mild cognitive impairment - Driving

*Based on functional capacity. Source: HJ Cohen
Systems Involved in Physiology of Balance

- Cognition
- Proprioception
- Balance Sensation
- Vision
- Foot-base of support
- Strength
- Joint Flexibility

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Brain: public domain; Eye: CC-BY-SA-4.0, Afrodriguez; Leg: CC-BY-SA-4.0, Scientific Animations; Muscles: CC BY-SA 3.0 Termininja; Nerves: CC-BY-SA-4.0, Medium69
Summary: Physiology of Aging and Transportation Coping

• Adults use cognitive ability to compensate for losses in physical ability.

• Cognitive training is the key to successful management of these changes.

• Planning must engage patient and family caregivers.
Older Driver Behavior

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Variations in Driving Patterns among Older Adults: Findings from the LongROAD Study

http://www.longroadstudy.org/

Guohua Li
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Big Idea: What is your challenge in understanding older drivers?

- Driving patterns and crash risks vary with driver characteristics and urbanicity
- Interventions to ensure safe mobility should take these variations into consideration
### Characteristics of LongROAD Study Participants (n=2990)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (65-79)</td>
<td>Mean = 72 yrs</td>
</tr>
<tr>
<td>Male</td>
<td>47%</td>
</tr>
<tr>
<td>White</td>
<td>86%</td>
</tr>
<tr>
<td>Currently married</td>
<td>63%</td>
</tr>
<tr>
<td>Bachelor’s or advanced degree</td>
<td>64%</td>
</tr>
<tr>
<td>Annual household income ≥ $80,000</td>
<td>47%</td>
</tr>
<tr>
<td>Currently employed</td>
<td>30%</td>
</tr>
</tbody>
</table>
Driving Data:
Objectively measured with an in-vehicle data recording device

**Surrogate driving safety measures**

**Hard braking event (near crash):**
- event with deceleration ≥0.4 g

**Speeding event:**
- speed ≥80 MPH sustained for at least 8 s
Annual mileage varies with and within driver age and sex

Annual mileage by age category

Annual mileage by gender
Annual mileage varies with and within study site and urbanicity.

[Box plots showing annual mileage by site and urbanicity.]

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Proportion of trips at night by study site
Incidence density of **hard braking events** by age and sex

- **Hard braking events per 1000 miles driven by age category**
  - 65-69 years: 4.8
  - 70-74 years: 4.8
  - 75-79 years: 5.2

- **Hard braking events per 1000 miles driven by gender**
  - Male: 4.7
  - Female: 5.1
Incidence density of hard braking events varies with study site and urbanicity

Hard braking events per 1000 miles driven by site

Hard braking events per 1000 miles driven by urbanicity

<table>
<thead>
<tr>
<th>Site</th>
<th>Hard Braking Events per 1000 miles driven</th>
</tr>
</thead>
<tbody>
<tr>
<td>UCDENVER</td>
<td>5.7</td>
</tr>
<tr>
<td>BASSETT</td>
<td>2.7</td>
</tr>
<tr>
<td>JHSPH</td>
<td>4.8</td>
</tr>
<tr>
<td>UMTRI</td>
<td>4.6</td>
</tr>
<tr>
<td>UCSD</td>
<td>7.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Urban</th>
<th>Suburban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.7</td>
<td>3.4</td>
<td>2.7</td>
</tr>
</tbody>
</table>
Incidence density of speeding events by age and sex

**Speeding events per 1000 miles driven by age category**

- 65-69 years: 9.3
- 70-74 years: 9.2
- 75-79 years: 8.5

**Speeding events per 1000 miles driven by gender**

- Male: 10.3
- Female: 7.9
Incidence density of speeding events by study site and urbanicity

Speeding events per 1000 miles driven by site

- UCDENVER: 11.0
- BASSETT: 2.3
- JHSPH: 6.6
- UMTRI: 14.1
- UCSD: 12.9

Speeding events per 1000 miles driven by urbanicity

- Urban: 10.8
- Suburban: 7.8
- Rural: 3.1

Columbia University Medical Center
Center for Injury Epidemiology and Prevention

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Driving patterns and risky behaviors in older adults are largely determined by residential urbanicity (living environment) and vary considerably within demographic groups.

Individualized programs are warranted to ensure safe mobility for older adults.
Longitudinal Research on Aging Drivers (LongROAD): study design and methods.

Li G1,2,3, Eby DW4, Santos R5, Mielenz TJ4, Molnar LJ4, Strogatz D7, Betz ME8,9, DiGuiseppi C9, Ryan LH10, Jones V11, Pitts S12, Hill LL13, DiMaggio C14, LeBlanc D4, Andrews HF15,16; LongROAD Research Team.

Funded by AAA Foundation for Traffic Safety.

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When Should Seniors Hang Up The Car Keys?

AAA: Older people get worse after losing the right to drive
Boston.com-Jul 30, 2015

Taking older drivers off the road tied to increased depression risk
Reuters-Jan 26, 2016

Older drivers with history of falls at greater risk for crashes

Older Americans who stop driving more likely to suffer from depression
Wgnssradio-Jul 23, 2015
Engineering for Older Drivers

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Federal Highway Administration, Texas Division
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THINK OF THE ROADWAYS IN YOUR COMMUNITY

1. Is there a demonstrated crash problem with aging road users?

2. Has the design or operations been associated with complaints from aging road users? Are you aware of any potential safety concerns for aging road users?

3. Is it linked to a destination in which older users are a significant proportion of current users?

4. Is the location within a census tract or zip code with an increase in the proportion of residents age 65 or older?
Available at: safety.fhwa.dot.gov/older_users/

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WHAT IS IN THE HANDBOOK?

- Chapter 2 — Intersections
- Chapter 3 — Interchanges
- Chapter 4 — Roadway Segments
- Chapter 5 — Construction/Work Zones
- Chapter 6 — Highway-Rail Grade Crossings

- 33 “Proven” Practices
- 18 “Promising” Practices

With 150 recommendations within these categories

Lifesavers, April 22-24, 2018
For drivers 80+, intersection crashes accounted for 37% of fatal crashes
Compared to 19% for drivers ages 16-59

Multiple vehicle intersection crashes - % by age, 2014

% of Fatal Crashes


Lifesavers, April 22-24, 2018
24 of the 51 Handbook Practices involve intersections

PROVEN PRACTICES
1. Intersecting Angle (Skew)
2. Receiving Lane (Throat) Width
3. Channelization
4. Intersection Sight Distance
5. Offset Left-Turn Lanes
6. Delineation of Edge Lines and Curbs
7. Curb Radius
8. Left-Turn Traffic Control for Signalized Intersections
9. Right-Turn Traffic Control for Signalized Intersections
10. Street Name Signs
11. Stop and Yield Signs
12. Lane Assignment on Intersection Approach
13. Traffic Signals
14. Intersection Lighting
15. Pedestrian Crossings
16. Roundabouts

PROMISING PRACTICES
17. Right Turn Channelization Design
18. Combination Lane-Use/Destination Overhead Guide Signs
19. Signal Head Visibility
20. High Visibility Crosswalks
21. Supplemental Pavement Markings for Stop and Yield Signs
22. Reduced Left-Turn-Conflict Intersections
23. Accessible Pedestrian Signal (APS) Treatments
24. Flashing Yellow Arrow

Lifesavers, April 22-24, 2018
OFFSET LEFT-TURN LANES (PROVEN PRACTICE)
HANDBOOK CHAPTER 2 – INTERSECTIONS
OFFSET LEFT-TURN LANES (PROVEN PRACTICE)
NEGATIVE OFFSET

Lifesavers, April 22-24, 2018
• Roundabouts effectively eliminating severe right-angle crashes.

• Roundabouts eliminate several problems associated with making left turns at intersections.

• 78 to 82% reduction in severe crashes
HANDBOOK CHAPTER 2 – INTERSECTIONS
RIGHT-TURN CHANNELIZATION DESIGN (PROMISING PRACTICE)

Lifesavers, April 22-24, 2018
Converting an undivided four-lane roadway into three lanes made up of two through lanes and a center two-way left turn lane and possibly adding bicycle lanes.
Leading pedestrian intervals allow pedestrians to establish presence in a crosswalk by providing a 3-7 second head start.

60% reduction in crashes.
HANDBOOK CHAPTER 2 – INTERSECTIONS
PEDESTRIAN CROSSINGS (PROVEN PRACTICE)

- Pedestrian crossing at channelized right-turn lane
- 56% reduction in crashes

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These may be urgently needed where a crash problem with aging drivers or pedestrians has been demonstrated.

Greater benefit may result from designing safer new roads and modifying existing roads before statistics reveal a crash problem.

Systemic Safety Improvements

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Changing Patterns of Older Adult Transportation

Johanna Zmud, PhD
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j-zmud@tti.tamu.edu

Lifesavers, April 22-24, 2018
U.S. seniors of today are a multi-segmented group, and all segments projected to grow to become nearly a quarter of population

<table>
<thead>
<tr>
<th>Segment</th>
<th>2016</th>
<th>2025</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Young Old (65-74)</td>
<td>8.8</td>
<td>10.8</td>
<td>10.4</td>
</tr>
<tr>
<td>Old (75-84)</td>
<td>4.5</td>
<td>6.0</td>
<td>8.0</td>
</tr>
<tr>
<td>Oldest of the Old (85+)</td>
<td>1.9</td>
<td>2.1</td>
<td>3.1</td>
</tr>
<tr>
<td>All Old Categories Combined (65+)</td>
<td>15.2</td>
<td>18.9</td>
<td>21.5</td>
</tr>
</tbody>
</table>
Uncertainty is key challenge in forecasting future shared mobility usage among U.S. seniors

- Most uncertain time regarding travel behavior and transportation demand
  - Vehicles and services that are technology-enabled may profoundly change personal travel choices of seniors in the future
  - Large intra-group variability in mobility while aging

Texas A&M Transportation Institute (TTI)  Lifesavers, April 22-24, 2018
DIMENSIONS OF MOBILITY AND AGING

1. Intra-generational change:
   As each person gets older there will be changes in their individual behavior. On average, mobility declines as age advances for seniors.

2. Inter-generational change:
   The seniors of today are different than the seniors of the past. On average, seniors are more mobile today than they were in the past.
CONCEPTUAL MODEL OF MOBILITY WHILE AGEING

- Economic activity ends
- Intra-generational decline with age
- Mobility impairment occurs
- Inter-generational increase

Source: Still Going ...and Going: The Emerging Travel Patterns of Older Adults, ifmo, 2017

Texas A&M Transportation Institute (TTI)

Lifesavers, April 22-24, 2018
U.S. seniors today attained and maintained high levels of auto ownership

Source: Still Going ...and Going: The Emerging Travel Patterns of Older Adults, ifmo, 2017

Texas A&M Transportation Institute (TTI)  
Lifesavers, April 22-24, 2018
Four key areas of influence in intra-generational differences.

1. Pensions, wealth, and workforce participation.
2. Life expectancy and health.
3. Living arrangements and social connections.
4. Transportation options and technology use.

Source: Still Going ...and Going: The Emerging Travel Patterns of Older Adults, ifmo, 2017
Lifesavers, April 22-24, 2018
Intra-generational mobility extenders and inhibitors among older adults in U.S.

1) Pensions, wealth, and workforce participation
   - Non-compulsory retirement policy
   - Increased workforce participation by some aged 65+
   - Reasons for continued workforce participation mix of financial, personal and social factors.

2) Life expectancy and health
   - Dramatic increases in life span due medical science and better public health
   - Life-expectancy gap decreasing between women and men
   - Increasing life expectancy may point to prolonged mobility; or it could simply mean more senior years, but with limited mobility.

3) Living arrangements and social connections
   - As they get older, some seniors are much likely to live alone; others with family.
   - More than half live in suburban or exurban areas

4) Transportation options and technology use
   - Car ownership and driving levels decrease with age
   - Smartphone ownership varies substantially by age; persons who need mobility support most, less able to use new mobility services

Source: Still Going ...and Going: The Emerging Travel Patterns of Older Adults, ifmo, 2017
While many young-old adults drive, the proportion of licensed drivers declines sharply between age 70 and 80

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Drivers as a % of Age Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>55-59</td>
<td>92%</td>
</tr>
<tr>
<td>60-64</td>
<td>92%</td>
</tr>
<tr>
<td>65-69</td>
<td>92%</td>
</tr>
<tr>
<td>70-74</td>
<td>89%</td>
</tr>
<tr>
<td>75-79</td>
<td>84%</td>
</tr>
<tr>
<td>80-84</td>
<td>78%</td>
</tr>
<tr>
<td>85 and older</td>
<td>70%</td>
</tr>
<tr>
<td>Total (all age groups)</td>
<td>84%</td>
</tr>
</tbody>
</table>
While many young-old adults embrace technology, adoption declines sharply for the old-old

![Bar chart showing percentage of young-old and old-old adults using cellphone, internet, and smartphone by age group. The chart indicates a decline in adoption rates with increasing age.

Source: Pew Research Center, 2015

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MaaS not yet operational in U.S.

Precursor Applications

1. MaaS platform that integrates transit, bikesharing, carsharing, parking, ride-hailing services
2. Integrated bikeshare and transit payment systems
3. Travel app compares public and private modes based on speed, price, carbon emissions per O/D
4. Amtrak-Lyft partnership to summon ride-hailing service through Amtrak app

Texas A&M Transportation Institute (TTI)
Mobility on demand (MOD) operations in U.S. are extensive

<table>
<thead>
<tr>
<th>Types</th>
<th>Scope of Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carsharing</td>
<td>45 operators</td>
</tr>
<tr>
<td>Bikesharing</td>
<td>72 cities</td>
</tr>
<tr>
<td>TNC* – Sequential Sharing</td>
<td>Uber 150 cities</td>
</tr>
<tr>
<td></td>
<td>Lyft 300 cities</td>
</tr>
<tr>
<td></td>
<td>Others 10-20 cities on average</td>
</tr>
<tr>
<td>TNC – Concurrent Sharing</td>
<td>Uber Pool 13 cities</td>
</tr>
<tr>
<td></td>
<td>Lyft 15 cities</td>
</tr>
<tr>
<td>Microtransit</td>
<td>Chariot (San Francisco, Austin)</td>
</tr>
<tr>
<td></td>
<td>Via (New York, Washington, DC, Chicago)</td>
</tr>
</tbody>
</table>

Source: Transportation Research Board, Special Report 319, 2016

Texas A&M Transportation Institute (TTI)
MOD usage in U.S. not as prevalent as one might think

• 15% of American adults have used ride-hailing apps, but 33% have never heard of these services.
• Frequent ride-hailing users are less likely than others to own a car; much more likely to use many transport options
• 64% of frequent users own a car and 63% drive regularly.
• Ride-hailing is strongly concentrated among urban residents
  • age 18-49
  • college grads
  • $75k+ income

Source: Pew Research Center, 2015
Bottom line for U.S. seniors

- Large market segment
  - In 2050, the population aged 65 and over is projected to be 84 million, almost double its estimated population of 43 million in 2012
- Not urban
  - Most Americans do not move once they reach retirement age
  - Nearly half of seniors live in suburban or exurban areas

- Mobility dependence
  - At age driving sharply declines (about 80), 17% own smartphones
  - At age driving sharply declines, income declines

Sources: American Community Survey, Nielsen, TTI, Pew Research Center

Texas A&M Transportation Institute (TTI)
So, U.S. seniors are not using MOD services

Source: Pew Research Center, 2015
Texas A&M Transportation Institute (TTI)
What is happening in U.S.? Specialized services

Uber and Lyft

- **Uber Grandpad**: technology platform specifically for seniors, simpler, bigger font, pre-set O/Ds
- **UberWAV**: on-demand wheelchair accessible vehicles and paratransit drivers
- **UberASSIST**: door-to-door support for riders with wheelchairs, walkers, scooters
- **Ride (Lyft) Hero**: ridesharing for older adults with a specially trained driver

New Start-Ups

- **GogoGrandparent**: Seniors call operator, books ride or use other services grocery delivery, dinner delivery, shopping
- **GreatCall Rides**: toll free number, connect with operator, books Lyft
- **RideWith24**: toll free number, speak with operator, books Uber

Source: National Aging and Disability Transportation Center

Texas A&M Transportation Institute (TTI)

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Why forecasting future travel behavior of older persons holds great uncertainty

- Some seniors redefining what it means to be old
- Senior generation of tomorrow will be different even from the seniors of today.
- Aging is a physiological process that can be slowed but not stopped, yet
- Mobility providers are reacting to specialized needs with new and unforeseen products and services

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Texas A&M Transportation Institute (TTI)
Resources for Older Drivers

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Programs for Older Drivers

• Assessment/Self-Help
• Improvement/Training
• Driving Cessation/Alternatives
• Assisting Emergency Response
Do we have all of the pieces?
Older Driver Safety Program

- **Resource Types**
  - Keeping Drivers Safe: self-help
  - Assessment/Addressing skills issues
  - Driving Cessation/Alternative Transportation options
  - Assisting First responders
The Power of Partnership

“The single biggest problem in communication is the illusion that it has taken place.”

-George Bernard Shaw

-Liz Papadopoulos, OCT

We Protect Lives.
Area Agencies on Aging/Aging & Disability Resource Connections

Best kept secret!

www.eldercare.gov

- Call lines staffed by Certified Information & Referral Specialists in Aging
- Online access to resources
- Demographic information
- Policy & Planning
- Program access point
GEORGIA DEPARTMENT OF DRIVER SERVICES

• Renewals
• Mobility Resources
• Transportation Options
• Medical Revocation Process

ChORUS: Clearing House for Older Road User Safety

https://roadsafeseniors.org
Courtesy of Elin Schold Davis, OTR/L, CDRS 2016 presentation
Help Yourself!

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# Driver Self-Rating Tool

**Drivers 65 Plus: Self-Rating Form**

**INSTRUCTIONS:** For each of the following 15 questions, check the symbol (✓) of the one answer that best describes you.

<table>
<thead>
<tr>
<th>Question</th>
<th>Always or Almost Always</th>
<th>Sometimes</th>
<th>Never or Almost Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I signal and check to the rear when I change lanes</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I wear a seat belt</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. I try to stay informed on changes in driving and highway laws and techniques</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Intersections bother me because there is so much to watch from all directions</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I find it difficult to decide when to merge with traffic on a busy interstate highway</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. I think I am slower than I used to be in reacting to dangerous driving situations</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. When I am really upset, it affects my driving</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. My thoughts wander when I drive</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Traffic situations make me angry</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. I get regular eye exams to keep my vision at its sharpest</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. I check with my doctor or pharmacist about how the medications I take affect my driving ability, if you do not take any medication, skip this question</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Scoring:** There are 5 steps.

- **Step 1:** Write the Check Mark Total square on the previous page to the right.
- **Step 2:** Write the Check Mark Total triangle on the previous page to the right.
- **Step 3:** Multiply the number in the square on the previous page.
- **Step 4:** Multiply the number in the triangle on the previous page.
- **Step 5:** Add the results of Steps 3 and 4.

**Interpretation of Score:**

<table>
<thead>
<tr>
<th>Score</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 15</td>
<td><strong>GO!</strong> You are aware of what is important and know what to do. Learn how to become even safer.</td>
</tr>
<tr>
<td>16 to 34</td>
<td><strong>CAUTION!</strong> You are engaging in some hazardous behaviors. Look to the Suggestions for Improvement.</td>
</tr>
</tbody>
</table>

*We Protect Lives.*

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Self-help for drivers & caregivers

• Free Hartford Publications
  http://thehartford.com/advance50/publications-on-aging

• AARP Driver Safety Program
  http://www.aarp.org/home-garden/transportation/driver_safety/

• The Hartford/MIT Age Lab Older Driver Safety:
  http://thehartford.com/advance50/

• AAA Self-Rating Tool:
  https://seniordriving.aaa.com/evaluate-your-driving-ability/self-rating-tool/
Resources to Assess/Sharpen skills

- CarFit – www.car-fit.org

- Defensive Driving Courses

- American Automobile Association (AAA) Roadwise Review and online courses
  http://seniordriving.aaa.com/

- American Association of Retired Persons (AARP) Driver Safety Courses
  http://www.aarp.org/ws/EO/driver-safety-programs/

- Certified Driving Rehabilitation Specialists (CDRS)
  http://alz.org/georgia/in_my_community_16195.asp
Questions to Ask Your Doctor

☐ Can you give me a referral to get my vision checked?
☐ Can you tell me which of my medications may increase my risk of falling?
☐ Are there any assistive devices that would be appropriate for me?
☐ What types of physical activity would be appropriate for me?
☐ Can you give me a referral to an occupational therapist for a home assessment to reduce my risk of falls at home?
☐ Are there community resources or classes that could help reduce my risk for falling?
Tell your doctor if you have experienced the following in the last 6 months ...

☐ A fall, or a near fall (slip or trip)
☐ Problems with walking or balance
☐ Muscle weakness (especially in the legs)
☐ Loss of feeling or numbness in your legs/feet
☐ Swelling in your ankles or feet
☐ Difficulty breathing or shortness of breath
☐ Dizzy or lightheaded, passed out or fainted
☐ Changes in hearing or vision
☐ Changes in your sleep pattern
☐ Chronic conditions like diabetes, arthritis or high/low blood pressure
☐ Felt depressed for an extended period of time
☐ A fear of falling
☐ Problems doing daily activities at home (such as bathing or getting dressed)

The Fall Prevention Center of Excellence is supported by the Archstone Foundation
Know your audience.
Breaking Down Tough Conversations

Module 1
The Meaning of Driving
Learn what driving means to older adults and the emotions involved with having to give it up.

Module 2
Observing Driving Skills
Learn to observe skills objectively and talk about alternatives to driving.

Module 3
Planning Conversations
Learn how to have "the talk" and identify alternative transportation to help a loved one stay connected and remain independent.
Keys over a lifetime
Skills Observation

- Safely Driving
  (No obvious warning signs)
  
- Safely Driving with Limitations
  (E.g., day driving only)
  
- Un safely Driving
  (Multiple warning signs)
  
- No Longer Driving
  (Risks of isolation)
Making a Plan

Overview

Nearly one-fifth (18%) of North American senior drivers age 85 or older who were surveyed say they have had family or friends suggest they reduce or stop driving. —Home Instead Senior Care research

Whether he or she has driven into the garage door or backed into the mailbox, sometimes an older adult's actions behind the wheel leave no doubt. It's time to give up the keys. If a senior does not recognize that fact too, families may face a bumpy road. That's why it might be time to ask your loved one to schedule a comprehensive driving evaluation by an occupational therapy driving rehabilitation specialist. Avoiding an inevitability doesn't make it go away, and waiting too long may mean missing out on learning about what can be done to extend driving longer. Some problems can be fixed! It's also important to remind seniors that driving does not equal mobility. Giving up driving is not giving up engagement.

Look for signs of changing driving abilities.
Conversation Starters

Make time to talk about the issues that are important to you and a loved one:

- "You know the doctor’s office has moved farther from your house, Mom. That would be quite a jaunt for you. Let’s talk about options for getting you there."

- "I know you count on driving to stay connected to your friends, but I’m concerned about your driving. I’d like to work on a solution together. Even if an accident is not your fault, you could be seriously hurt."

- "It’s not you, Dad. The disease is robbing you of your ability to drive. You can’t blame yourself. We all just want you to be safe. Let’s talk about how you can give up your car but still be active. What are your concerns?" (Listen more than you talk!)

- "Since I live three hours away and can’t drive you every day, let’s talk about ways to help you get to where you need to go on days when you may not be safe driving."

Discover ways to plan ahead.
Program Goals and Outcomes

What is CarFit for the older driver?

CarFit is an educational program that offers older adults the opportunity to check how well their personal vehicles "fit" them.
What is Yellow Dot?

• Improve communication when victims may be unable to communicate
• Provides crucial medical information
• Assists first responders in the event of a car crash
• Goal: Save lives during critical “golden hour”
Questions?
Most of our panelists will be available for further discussion

5:15 to 6:15 pm

Convention Center Room 206

Please join us!

Bring your friends who couldn’t attend this panel!
Building Effective Aging Drivers Interventions: Do You Have All the Right Pieces?

Older Driver Physiology - Toni Miles, MD, PhD, University of Georgia College of Public Health (tonimile@uga.edu)


Older Driver Behavior - Guohua Li, MD, DrPH, Columbia University (gl2240@cumc.columbia.edu)

- AAA Foundation for Traffic Safety - Vulnerable Road Users: [https://aaafoundation.org/category/vulnerable-road-users/](https://aaafoundation.org/category/vulnerable-road-users/)

Engineering for Older Drivers - Amelia (Millie) Hayes, PE, Federal Highway Administration Texas Division (Amelia.Hayes@dot.gov)

  The Handbook has three sections: I. Using the Handbook to select treatments to address problems for aging drivers and pedestrians; II. Treatments for 51 proven and promising traffic control and design elements in five categories: Intersections, Interchanges, Roadway Segments, Construction/Work Zones, and Highway-Rail Grade Crossings; III. Rationale and supporting evidence for the treatments.
  - FHWA Older Road User Safety Web site: [https://safety.fhwa.dot.gov/older_users/](https://safety.fhwa.dot.gov/older_users/)
    This contains other FHWA resources and links to other agencies promoting older road user safety.
  - FHWA Transportation and Livability Web site: [https://safety.fhwa.dot.gov/older_users/](https://safety.fhwa.dot.gov/older_users/)
    This site contains resources to support integration of multimodal transportation infrastructure and facilities. It also contains links to additional FHWA program sites.

Changing Patterns in Older Adult Transportation - Johanna Zmud, PhD, Texas A&M Transportation Institute (j-zmud@tti.tamu.edu)

- Institute for Mobility Research (ifmo), Publications: [https://www.ifmo.de/publications.html](https://www.ifmo.de/publications.html)

Resources for Older Drivers - Elizabeth Head, MPH, Georgia Department of Public Health (Elizabeth.Head@dph.ga.gov)

- The Hartford/MIT Age Lab Older Driver Safety: [http://thehartford.com/advance50/](http://thehartford.com/advance50/)
- CarFit: [www.car-fit.org](http://www.car-fit.org)